Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application: Listing of Claims:

 (Currently Amended) Sulfonamide compounds according to formula I

$$Ar^{1}$$
 N $(CH_{2})_{n}$ Ar^{2} SO_{2} Y

with its geometrical isomers, in an optically active form as enantiomers, diastereomers, as well as in the form of racemates, as well as pharmaceutically acceptable salts thereof, wherein

 ${\rm Ar}^1$ and ${\rm Ar}^2$ are independently from each other substituted or unsubstituted aryl or heteroaryl groups,

X is O or S, preferably O;

 R^1 is hydrogen or a C_1 - C_6 -alkyl or hydroxy group, or R^1 forms a substituted or unsubstituted 5-6-membered saturated or unsaturated ring with Ar^1 ;

n is an integer from 0 to 5;

Y within formula I is a <u>substituted</u> or <u>unsubstituted</u> piperidino moiety, whereby one nitrogen atom within saidpiperidino moiety forms a bond with the sulfonyl group of formula I thus providing a sulfonamide,

with the proviso that if Ar^1 is 4-chlorophenyl, X is 0, R^1 is H, Ar^2 is thienyl, and Y is not para-substituted by 2-hydroxyethyl,

with the further proviso that if Ar^1 is phenyl, X is 0, R^1 is H, Ar^2 is thienyl, and Y is not substituted in its β position by a benzo $\frac{(5,6)}{[5,6]}$ cyclohepta $\frac{(1,2b)}{[1,2b]}$ pyridine or a benzo $\frac{(5,6)}{[5,6]}$ cyclohept $\frac{(3,4)}{[3,4]}$ ene $\frac{(1,2b)}{[1,2b]}$ pyridine—; with the final proviso that if X is

oxygen and Y is a 4-8 membered saturated cyclic alkyl containing one or two nitrogen atoms, Y shall not be substituted by a group (C=O)N(R,R') at the α -position of the sulfonamide nitrogen.

2. (Currently Amended) A composition for treatment of disorders associated with the abnormal expression or activity of JNK comprising a sulfonamide compound according to formula I

$$Ar^{1}$$
 N $(CH_{2})_{n}$ Ar^{2} SO_{2} Y X R^{1}

I

with its geometrical isomers, in an optically active form as enantiomers, dia-stereomers, as well as in the form of racemates, as well as pharmaceutically acceptable salts thereof, wherein

 ${\rm Ar}^1$ and ${\rm Ar}^2$ are independently from each other substituted or unsubstituted aryl or heteroaryl groups,

X is O or S, preferably O;

 R^1 is hydrogen or a C_1 - C_6 -alkyl group, or R^1 forms a substituted or unsubstituted 5-6-membered saturated or unsaturated ring with Ar^1 ;

n is an integer from 0 to 5;

Y within formula I is a piperidino group;

with the proviso that if Y is substituted at the β -position of the piperidino- nitrogen by a benzo[5, 6]cyclohepta[1, 2b]pyridine, or a benzo[5, 6]cyclohept (3,4) ene [1, 2b]pyridine, while Ar² is thienyl, X is oxygen, R¹ is hydrogen and n is 1, Ar¹ shall not be a phenyl group;

and a pharmaceutically acceptable carrier with the final proviso that if X is oxygen and Y is a 4-8 membered saturated

cyclic alkyl containing one or two nitrogen atoms, Y shall not be substituted by a group (C=0)N(R,R') at the α -position of the sulfonamide nitrogen.

3. (Currently Amended) A sulfonamide compound according to claim 1 or a composition according to claim 2, wherein Y is a piperidino group of the formula

whereby, L^1 and L^2 are independently selected from each other from the group consisting of H, substituted or unsubstituted C_1 - C_6 -aliphatic alkyl, substituted or unsubstituted C_2 - C_6 -alkenyl, substituted or unsubstituted C_2 - C_6 -alkynyl, substituted or unsubstituted cyclic C_4 - C_8 -alkyl optionally containing 1-3 heteroatoms and optionally fused with aryl or heteroaryl; or L^1 and L^2 are independently selected from the group consisting of substituted or unsubstituted aryl, substituted or unsubstituted heteroaryl, aryl- C_1 - C_6 -alkyl, heteroaryl- C_1 - C_6 -alkyl, -C(O)-OR 3 , -C(O)-R 3 , -C(O)-NR 3 'R 3 , -NR 3 'C(O)R 3 , -NR 3 'C(O)R 3 , -NR 3 'C(O)R 3 , -NSO₂R 3 , and -SO₂NR 3 'R 3 ,

with R^3 , and R^3 being substituents independently selected from the group consisting of H, substituted or unsubstituted C_1 - C_6 -alkyl, substituted or unsubstituted C_2 - C_6 -alkenyl, substituted or unsubstituted aryl, substituted or unsubstituted or unsubstituted aryl- C_1 - C_6 -alkyl, and substituted or unsubstituted heteroaryl- C_1 - C_6 -alkyl;

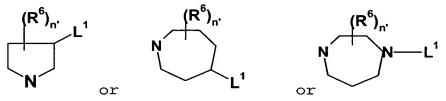
said aryl or heteroaryl groups being optionally substituted C_1 - C_6 -alkyl, C_1 - C_6 -alkoxy, C_2 - C_6 -alkenyl, C_2 - C_6 -alkynyl, amino, acylamino, aminocarbonyl, C_1 - C_6 -alkoxycarbonyl, aryl, carboxyl, cyano, halogen, hydroxy, nitro, sulfonyl, sulfoxy, C_1 - C_6 -thioalkoxy,

or L¹ and L² taken together form a 4-8 membered, substituted or unsubstituted saturated cyclic alkyl or heteroalkyl group; and

 R^6 is selected from the group consisting of hydrogen, substituted or unsubstituted C_1 - C_6 -alkyl, substituted or unsubstituted C_1 - C_6 -alkoxy, OH, halogen, nitro, cyano, sulfonyl, and oxo (=0), and

n' is an integer from 0 to 4.

4. (Withdrawn) A sulfonamide derivative according to claim 1 or 2, wherein Y is a pyrrolidine, an azepan or a 1,4-diazepan moiety of the below formulas



wherein L^1 is selected from the group comprising or consisting of H, substituted or unsubstituted C_1 - C_6 -alkyl, substituted or unsubstituted C_2 - C_6 -alkenyl, substituted or unsubstituted cyclic C_4 - C_8 -alkyl optionally containing 1-3 heteroatoms and optionally fused with aryl or heteroaryl; or L^1 and L^2 are independently selected from the group comprising or consisting of substituted or unsubstituted aryl, substituted or unsubstituted aryl, heteroaryl- C_1 - C_6 -alkyl, -C(0)- OR^3 , -C(0)- R^3 , -C(0)- NR^3 ' R^3 , - NR^3 ' R^3 , - NR^3 ' R^3 , - RR^3 ' R^3 ', - RR^3 '

 R^3 and $R^{3'}$ are substituents independently selected from the group comprising or consisting of H, substituted or unsubstituted C_1 - C_6 -alkyl, substituted or unsubstituted C_2 - C_6 -alkenyl, substituted or unsubstituted aryl, substituted or unsubstituted or unsubstituted aryl- C_1 - C_6 -alkyl, substituted or unsubstituted heteroaryl- C_1 - C_6 -alkyl;

 R^6 is selected from the group comprising or consisting of hydrogen, substituted or unsubstituted C_1 - C_6 -alkyl, substituted or unsubstituted C_1 - C_6 -alkoxy, OH, halogen, nitro, cyano, sulfonyl, oxo (=0), sulfoxy, acyloxy, thioalkoxy and n' is an integer from 0 to 4, preferably 0.

- 5. (Currently Amended) A sulfonamide compound according to claim 1, wherein Ar^1 and Ar^2 are independently selected from the group consisting of phenyl, thienyl, furyl, pyridyl, thioxo-dihydropyridine optionally substituted by C_1 - C_6 -alkyl, C_1 - C_6 -alkoxy, C_2 - C_6 -alkenyl, C_2 - C_6 -alkynyl, amino, acylamino, aminocarbonyl, C_1 - C_6 -alkoxycarbonyl, aryl, carboxyl, cyano, halogen, hydroxy, nitro, sulfonyl, and C_1 - C_6 -thioalkoxy.
- 6. (Previously Presented) A sulfonamide compound according to claim 5, wherein Ar¹ is an unsubstituted or substituted phenyl.
- 7. (Previously Presented) A sulfonamide compound according to claim 5, wherein Ar² is an unsubstituted or substituted thienyl or furanyl group.
- 8. (Currently Amended) A sulfonamide compound according to claim 1, wherein Ar¹ is selected from the group consisting of a 4-chlorophenyl, nitrophenyl, hydroxyphenyl, alkoxy phenyl, pyridyl, 3,4,-dihydroxyphenyl, thioxodihydropyridine or its tautomer, and pyrazole and X is O, R¹ is hydrogen, n is 1, Ar² is thienyl or furanyl.

9. (Currently Amended) A sulfonamide compound according to claim 8, wherein Y is

 $(R^6)_{n'}$ selected from the group consisting of substituted or unsubstituted C_1 - C_6 alkyl, substituted or unsubstituted C_1 - C_6 alkoxy, OH, halogen, <u>nitric-cyans_nitro</u>, <u>cyano</u>, sulfonyl, <u>compounds_and oxo</u>; <u>n_n^1</u> is an integer of from 0 to 4; and

Wherein—wherein L^1 and L^2 are independently selected from each other from the group consisting of H, substituted or unsubstituted C_1 - C_6 -aliphatic alkyl, substituted or unsubstituted C_2 - C_6 alkenyl, substituted or unsubstituted C_2 - C_6 alkenyl, substituted or unsubstituted C_2 - C_6 alkenyl, substituted or unsubstituted C_2 - C_4 alkyl optionally containing 1-3 heteroatoms and optionally fused with aryl or heteroaryl; or L^1 and L^2 are independently selected from the group consisting of substituted or unsubstituted aryl, substituted or unsubstituted heteroaryl, aryl- C_1 - C_4 alkyl, heteroaryl- C_1 - C_4 alkyl, -C(O)- OR^3 , -C(O)- R^3 , -C(O)-

With R^3 and R^3 ' being substituents independently selected from the group consisting of H, substituted or unsubstituted C_1 - C_4 alkyl, substituted or unsubstituted C_2 - C_6 alkenyl, substituted or unsubstituted aryl, substituted or unsubstituted aryl- C_1 - C_4 -alkyl, substituted or unsubstituted heteroaryl- C_1 - C_6 -alkyl;

Said—said aryl or heteroaryl groups being optionally substituted C_1 - C_6 -alkyl, C_1 - C_6 -alkoxy, C_2 - C_6 -alkenyl, C_2 - C_6 -alkynyl, amino, acylamino, aminocarbonyl, C_1 - C_6 -alkoxycarbonyl, aryl, carboxyl, cyano, halogen, hydroxy, nitro, sulfonyl, sulfoxy, C_1 - C_6 -thioalkoxy; pr

_____L¹ and L² taken together form a 4 8 member substituted or unsubstituted saturated cyclic alkyl or heteroalkyl group.

10. (Currently Amended) A sulfonamide compounds compound according to claim 9, wherein R^6 is H, L^2 is H, L^1 is a 5-membered cyclic group containing 3 heteroatoms; or L^1 is - $C(0)-R^3$, or -NHR³;

with R^3 being a substituent selected from the group comprising or consisting of C_1 - C_6 - C_4 -alkyl, aryl, heteroaryl, aryl- C_1 - C_6 -alkyl, and heteroaryl- C_1 - C_6 -alkyl;

said aryl or heteroaryl groups being optionally substituted by halogen, hydroxy, nitro, or sulfonyl.

11. (Previously Presented) A sulfonamide compound according to claim 1, selected from the group consisting of:

4-Chloro-N-{5-[4-(3-trifluoromethanesulfonyl-phenylamino)-piperidine-1-sulfonyl]-thiophen-2-ylmethyl}-benzamide;

4-chloro-N-[(5-{[4-(4-fluorobenzoyl)piperidin-1-yl]sulfonyl}thien-2-yl)methyl]benzamide;

4-chloro-N-[(5-{[4-(3-piperidin-1-

ylpropyl)piperazin-1-yl]sulfonyl}thien-2-yl)methyl]benzamide;

4-chloro-N-({5-[(4-hydroxy-4-phenylpiperidin-1-

N-({5-[(4-

benzoylpiperidin-1-yl)sulfonyl]thien-2-yl}methyl)-4-

yl)sulfonyl]thien-2-yl}methyl)benzamide;

chlorobenzamide; 4-chloro-N-[(5-{[4-(2-oxo-2,3-dihydro-1H-

benzimidazol-1-yl)piperidin-1-yl]sulfonyl}thien-2-

yl) methyl] benzamide;

N-({5-[(4-benzylpiperidin-1-yl)sulfonyl]thien-2-yl}methyl)-4-chlorobenzamide;

4-chloro-N-[(5-{[4-(2,4-difluorobenzoyl)piperidin-1-yl]sulfonyl}thien-2-yl)methyl]benzamide;

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tert-butyl 1-[(5-{[(4-
chlorobenzoyl) amino] methyl } thien-2-yl) sulfonyl ] piperidin-4-
ylcarbamate;
          4-chloro-N-{[5-(piperidin-1-ylsulfonyl)thien-2-
yl]methyl}benzamide;
          4-chloro-N-{[5-({3-hydroxy-4-[3-
(trifluoromethyl)phenyl]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          N-[(5-{[4-(benzyloxy)piperidin-1-yl]sulfonyl}thien-
2-yl)methyl]-4-chlorobenzamide;
          N-(4-chlorophenyl)-2-(5-{[4-(2-oxo-2,3-dihydro-1H-
benzimidazol-1-yl)piperidin-1-yl]sulfonyl}thien-2-
yl) acetamide;
          4-chloro-N-({5-[(4-hydroxypiperidin-1-
yl) sulfonyl] thien-2-yl}methyl) benzamide;
          N-({5-[(4-benzyl-4-hydroxypiperidin-1-
yl)sulfonyl]thien-2-yl}methyl)-4-chlorobenzamide;
          N-\{[5-(\{4-[(2-tert-butyl-1H-indol-5-
yl)amino]piperidin-1-yl}sulfonyl)thien-2-yl]methyl}-4-
chlorobenzamide;
          4-chloro-N-{[5-({4-[(phenylacetyl)amino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}benzamide;
          N-[(5-\{[4-(2H-1,2,3-benzotriazol-2-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-chlorobenzamide;
          4-chloro-N-[(5-{[4-(4-chlorobenzoyl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-chloro-N-({5-[(4-phenoxypiperidin-1-
yl)sulfonyl]thien-2-yl}methyl)benzamide;
          N-{[5-({4-[benzyl(methyl)amino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}-4-chlorobenzamide;
          4-chloro-N-{[5-({4-[3-(2,4-dichlorophenyl)-1H-
pyrazol-5-yl]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
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4-chloro-N-[(5-{[4-(5-thien-2-yl-1H-pyrazol-3-
yl)piperidin-1-yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-chloro-N-[(5-{[4-(2,3,4,5,6-
pentamethylbenzoyl)piperidin-1-yl]sulfonyl}thien-2-
yl) methyl] benzamide;
          4-chloro-N-\{[5-(\{4-[5-(4-methoxyphenyl)-1H-pyrazol-
3-yl]piperidin-1-yl}sulfonyl)thien-2-yl]methyl}benzamide;
          N-({5-[(4-anilinopiperidin-1-yl)sulfonyl]thien-2-
yl}methyl)-4-chlorobenzamide;
          4-chloro-N-[(5-{[4-(2-phenylethyl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          N-[(5-\{[4-(1H-1,2,3-benzotriazol-1-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-chlorobenzamide;
          2-(5-{[4-(1H-1,2,3-benzotriazol-1-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)-N-(4-chlorophenyl)acetamide;
          2-{1-[(5-{[(4-chlorobenzoyl)amino]methyl}thien-2-
yl)sulfonyl]piperidin-4-yl}-2H-1,2,3-benzotriazole-5-
carboxylic acid;
          4-chloro-N-[(5-{[4-(5-chloro-1H-1,2,3-benzotriazol-
1-yl)piperidin-1-yl]sulfonyl}thien-2-yl)methyl]benzamide;
          methyl 1-\{1-[(5-\{[(4-
chlorobenzoyl)amino]methyl}thien-2-yl)sulfonyl]piperidin-4-
yl}-1H-1,2,3-benzotriazole-5-carboxylate;
          methyl 1 - \{1 - [(5 - \{[(4 -
chlorobenzoyl)amino]methyl}thien-2-yl)sulfonyl]piperidin-4-
yl}-1H-1,2,3-benzotriazole-6-carboxylate;
          methyl 2-\{1-[(5-\{[(4-
chlorobenzoyl)amino]methyl}thien-2-yl)sulfonyl]piperidin-4-
yl}-2H-1,2,3-benzotriazole-5-carboxylate;
          4-chloro-N-[(5-{[4-(6-chloro-1H-1,2,3-benzotriazol-
1-yl)piperidin-1-yl]sulfonyl}thien-2-yl)methyl]benzamide;
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4-chloro-N-{[5-({4-[5-(trifluoromethyl)-1H-1,2,3-
benzotriazol-1-yl]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          N-[(5-\{[4-(7-aza-1H-benzimidazol-1-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-chlorobenzamide;
          1-\{1-[(5-\{[(4-chlorobenzoyl)amino]methyl\}thien-2-
yl)sulfonyl]piperidin-4-yl}-1H-1,2,3-benzotriazole-5-
carboxylic acid;
          1-{1-[(5-{[(4-chlorobenzoyl)amino]methyl}thien-2-
yl)sulfonyl]piperidin-4-yl}-1H-1,2,3-benzotriazole-6-
carboxylic acid;
          N-[(5-\{[4-(2-amino-9H-purin-9-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-chlorobenzamide;
          4-chloro-N-[(5-{[4-(9H-purin-9-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          N-[(5-{[4-(6-amino-9H-purin-9-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-chlorobenzamide;
          4-chloro-N-({5-[(4-{6-nitro-1H-benzimidazol-1-
yl}piperidin-1-yl)sulfonyl]thien-2-yl}methyl)benzamide;
          4-chloro-N-({5-[(4-{5-nitro-1H-benzimidazol-1-
yl}piperidin-1-yl)sulfonyl]thien-2-yl}methyl)benzamide;
          4-chloro-N-[(5-{[4-(2H-1,2,3-triazol-2-yl)piperidin-
1-yl]sulfonyl}thien-2-yl)methyl]benzamide;
          N-[(5-{[4-(1H-benzimidazol-1-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-chlorobenzamide;
          4-chloro-N-{[5-({4-[3-propylanilino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}benzamide;
          4-chloro-N-{[5-({4-[3-
(trifluoromethyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          4-chloro-N-{[5-({4-[3-
(dimethylamino) anilino] piperidin-1-yl sulfonyl) thien-2-
yl]methyl}benzamide;
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methyl 3-(\{1-[(5-\{[(4-chlorobenzoyl)amino]-
methyl}thien-2-yl)sulfonyl]piperidin-4-yl}amino)-benzoate;
          4-chloro-N-{[5-({4-[3-
(methylsulfanyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          4-chloro-N-({5-[(4-{3-nitroanilino}piperidin-1-
yl) sulfonyl] thien-2-yl \methyl) benzamide;
          4-chloro-N-[(5-{[4-(2-methoxyanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          3-(\{1-[(5-\{[(4-chlorobenzoyl)amino]methyl\}thien-2-
yl) sulfonyl]piperidin-4-yl}amino) benzamide;
          4-chloro-N-{[5-({4-[2-
(trifluoromethyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          4-chloro-N-({5-[(4-{2-nitro-4-
[(trifluoromethyl)sulfonyl]anilino}piperidin-1-
yl) sulfonyl] thien-2-yl}methyl) benzamide;
          4-chloro-N-[(5-{[4-(4-chloroanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-chloro-N-{[5-({4-[4-
(trifluoromethyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          4-chloro-N-({5-[(4-{4-
[(trifluoromethyl)sulfonyl]anilino}piperidin-1-
yl)sulfonyl]thien-2-yl}methyl)benzamide;
          4-chloro-N-({5-[(4-{2-nitroanilino}piperidin-1-
yl)sulfonyl]thien-2-yl}methyl)benzamide;
          N-{[5-({4-[4-(aminocarbonyl)anilino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}-4-chlorobenzamide;
          4-chloro-N-{[5-({4-[4-(1,3-dithiolan-2-
yl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
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N-[(5-{[4-(3-chloroanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-nitrobenzamide;
          4-chloro-N-[(5-{[4-(3-chloroanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-chloro-N-[(5-{[4-(3-methoxyanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-chloro-N-{[5-({4-[3-
(methylsulfonyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          N-({5-[(4-{3-[amino(imino)methyl]anilino}piperidin-
1-yl)sulfonyl]thien-2-yl}methyl)-4-chlorobenzamide;
          4-chloro-N-({5-[(4-{3-[(2-
hydroxyethyl) sulfonyl] anilino piperidin-1-yl) sulfonyl] thien-2-
yl \methyl) benzamide;
          N-[(5-{[4-(2-aminoanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-chlorobenzamide;
          4-chloro-N-[(5-{[4-(2-hydroxyanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-chloro-N-[(5-{[4-(4-hydroxyanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-chloro-N-({5-[(4-{3-
[(trifluoromethyl)sulfanyl]anilino}piperidin-1-
yl) sulfonyl] thien-2-yl}methyl) benzamide;
          4-chloro-N-[(5-{[4-(3-toluidino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-chloro-N-({5-[(4-{[3-chloro-5-
(trifluoromethyl)pyridin-2-yl]amino}piperidin-1-
yl)sulfonyl]thien-2-yl}methyl)benzamide;
          4-chloro-N-{[5-({4-[3-(1,3-oxazol-5-
yl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          N-[(5-{[4-(3-tert-butylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-chlorobenzamide;
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4-chloro-N-[(5-{[4-(2-propylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-chloro-N-{[5-({4-[(2,2-dioxido-1,3-dihydro-2-
benzothien-5-yl)amino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          4-chloro-N-[(5-{[4-(2,3-dihydro-1H-inden-5-
ylamino)piperidin-1-yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-chloro-N-[(5-{[4-(4-propylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-chloro-N-[(5-{[4-({3-nitropyridin-2-
yl amino) piperidin-1-yl] sulfonyl thien-2-yl) methyl] benzamide;
          N-\{[5-(\{4-[(3-aminopyridin-2-yl)amino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}-4-chlorobenzamide;
          N-[(5-\{[4-([1,1'-biphenyl]-3-ylamino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-chlorobenzamide;
          N-[(5-\{[4-(3-benzylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-chlorobenzamide;
          4-chloro-N-[(5-{[4-(pyrimidin-2-ylamino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-chloro-N-{[5-({4-[4-(morpholin-4-
ylsulfonyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          4-chloro-N-({5-[(4-{[4-(trifluoromethyl)pyrimidin-2-
yl]amino}piperidin-1-yl)sulfonyl]thien-2-yl}methyl)benzamide;
          4-chloro-N-[(5-{[4-(3-cyclohexyl-4-
hydroxyanilino)piperidin-1-yl]sulfonyl}thien-2-
yl) methyl] benzamide;
          N-({5-[(4-{3-}
[(butylamino)sulfonyl]anilino}piperidin-1-yl)sulfonyl]thien-2-
yl}methyl)-4-chlorobenzamide;
          4-chloro-N-[(5-{[4-(3-ethylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
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4-chloro-N-[(5-{[4-(5,6,7,8-tetrahydronaphthalen-1-
ylamino)piperidin-1-yl]sulfonyl}thien-2-yl)methyl]benzamide;
          N-{[5-({4-[3-(aminosulfonyl)anilino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}-4-chlorobenzamide;
          4-chloro-N-[(5-{[4-(quinolin-5-ylamino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-chloro-N-[(5-{[4-(quinolin-8-ylamino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-Chloro-N-[(5-{[4-(3-propylphenoxy)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-nitro-N-({5-[(4-{3-
[(trifluoromethyl)sulfonyl]anilino}piperidin-1-
yl) sulfonyl] thien-2-yl}methyl) benzamide;
          N-[(5-\{[4-(1H-1,2,3-benzotriazol-1-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-nitrobenzamide;
          4-nitro-N-({5-[(4-{3-
[(trifluoromethyl)sulfonyl]anilino}piperidin-1-
yl) sulfonyl] thien-2-yl \methyl) benzamide;
          N-[(5-\{[4-(2,4-difluorobenzoyl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-nitrobenzamide;
          N-[(5-\{[4-(1H-1,2,3-benzotriazol-1-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-nitrobenzamide;
          N-[(5-\{[4-(1H-1,2,3-benzotriazol-1-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-nitrobenzamide;
          4-nitro-N-({5-[(4-{3-
[(trifluoromethyl)sulfonyl]anilino}piperidin-1-
yl)sulfonyl]thien-2-yl}methyl)benzamide;
          N-[(5-\{[4-(2,4-difluorobenzoyl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-nitrobenzamide;
          N-[(5-\{[4-(1H-1,2,3-benzotriazol-1-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-nitrobenzamide;
          3-nitro-N-[(5-{[4-(3-methoxyanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
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```
3-nitro-N-{[5-({4-[3-
(trifluoromethyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          N-{[5-({4-[3-(dimethylamino)anilino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}-3-nitrobenzamide;
          3-nitro-N-{[5-({4-[3-
(methylsulfonyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          3-nitro-N-{[5-({4-[3-
(methylsulfanyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          N-{[5-({4-[3-(aminosulfonyl)anilino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}-3-nitrobenzamide;
          methyl 3-\{[1-(\{5-[(\{3-\text{nitrobenzoyl}\}\text{amino})\text{methyl}]-
thien-2-yl}sulfonyl)-piperidin-4-yl]amino}benzoate;
          N-{[5-({4-[3-(aminocarbonyl)anilino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}-3-nitrobenzamide;
          3-nitro-N-({5-[(4-{3-nitroanilino}piperidin-1-
yl) sulfonyl] thien-2-yl}methyl) benzamide;
          3-nitro-N-[(5-{[4-(2-methoxyanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          3-nitro-N-{[5-({4-[2-
(trifluoromethyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          3-nitro-N-({5-[(4-{2-nitroanilino}piperidin-1-
yl)sulfonyl]thien-2-yl}methyl)benzamide;
          N-[(5-{[4-(4-chloroanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-nitrobenzamide;
          3-nitro-N-{[5-({4-[4-
(trifluoromethyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
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3-nitro-N-({5-[(4-{4-
[(trifluoromethyl)sulfonyl]anilino}piperidin-1-
yl) sulfonyl] thien-2-yl}methyl) benzamide;
          N-{[5-({4-[4-(aminocarbonyl)anilino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}-3-nitrobenzamide;
          N-[(5-{[4-(3-propylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-nitrobenzamide;
          N-[(5-{[4-(3-chloroanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-nitrobenzamide;
          4-nitro-N-[(5-{[4-(3-methoxyanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-nitro-N-{[5-({4-[3-
(trifluoromethyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          N-{[5-({4-[3-(dimethylamino)anilino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}-4-nitrobenzamide;
          4-nitro-N-[(5-{[4-(3-propylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-nitro-N-{[5-({4-[3-
(methylsulfonyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          4-nitro-N-{[5-({4-[3-
(methylsulfanyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          N-{[5-({4-[3-(aminosulfonyl)anilino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}-4-nitrobenzamide;
          methyl 3-\{[1-(\{5-[(\{4-nitrobenzoyl\}amino)methyl]-
thien-2-yl}sulfonyl)piperidin-4-yl]amino}benzoate;
          3-\{[1-(\{5-[(\{4-nitrobenzoyl\}amino)methyl]thien-2-
yl}sulfonyl)piperidin-4-yl]amino}benzamide;
          4-nitro-N-({5-[(4-{3-nitroanilino}piperidin-1-
yl)sulfonyl]thien-2-yl}methyl)benzamide;
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4-nitro-N-[(5-{[4-(2-methoxyanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-nitro-N-{[5-({4-[2-
(trifluoromethyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          4-nitro-N-({5-[(4-{2-nitroanilino}piperidin-1-
yl)sulfonyl]thien-2-yl}methyl)benzamide;
          N-[(5-{[4-(4-chloroanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-nitrobenzamide;
          4-nitro-N-{[5-({4-[4-
(trifluoromethyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          4-nitro-N-({5-[(4-{4-
[(trifluoromethyl)sulfonyl]anilino}piperidin-1-
yl)sulfonyl]thien-2-yl}methyl)benzamide;
          N-{[5-({4-[4-(aminocarbonyl)anilino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}-4-nitrobenzamide;
          N-\{[5-(\{4-[4-(1,3-dithiolan-2-yl)\}anilino]piperidin-
1-yl}sulfonyl)thien-2-yl]methyl}-4-nitrobenzamide;
          N-({5-[(4-{3-[amino(imino)methyl]anilino}piperidin-
1-yl)sulfonyl]thien-2-yl}methyl)-3-nitrobenzamide;
          N-({5-[(4-{3-[(2-
hydroxyethyl)sulfonyl]anilino}piperidin-1-yl)sulfonyl]thien-2-
yl}methyl)-3-nitrobenzamide;
          N-({5-[(4-anilinopiperidin-1-yl)sulfonyl]thien-2-
yl}methyl)-3-nitrobenzamide;
          N-({5-[(4-{3-[(2-
hydroxyethyl)sulfonyl]anilino}piperidin-1-yl)sulfonyl]thien-2-
yl}methyl)-4-nitrobenzamide;
          N-({5-[(4-anilinopiperidin-1-yl)sulfonyl]thien-2-
yl \methyl) -4-nitrobenzamide;
          N-({5-[(4-{3-[amino(imino)methyl]anilino}piperidin-
1-yl)sulfonyl]thien-2-yl}methyl)-4-nitrobenzamide;
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3-nitro-N-({5-[(4-{3-
[(trifluoromethyl)sulfanyl]anilino}piperidin-1-
yl) sulfonyl] thien-2-yl}methyl) benzamide;
          4-nitro-N-({5-[(4-{3-
[(trifluoromethyl)sulfanyl]anilino}piperidin-1-
yl)sulfonyl]thien-2-yl}methyl)benzamide;
          3-nitro-N-[(5-{[4-({3-nitropyridin-2-
yl amino) piperidin-1-yl] sulfonyl thien-2-yl) methyl] benzamide;
          N-\{[5-(\{4-[(2,2-dioxido-1,3-dihydro-2-benzothien-5-
yl)amino]piperidin-1-yl}sulfonyl)thien-2-yl]methyl}-3-
nitrobenzamide;
          N-[(5-{[4-(2,3-dihydro-1H-inden-5-ylamino)piperidin-
1-yl]sulfonyl}thien-2-yl)methyl]-3-nitrobenzamide;
          3-nitro-N-[(5-{[4-(2-propylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          3-nitro-N-[(5-{[4-(4-propylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          N-[(5-{[4-(3-tert-butylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-nitrobenzamide;
          3-nitro-N-{[5-({4-[3-(1,3-oxazol-5-
yl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          3-nitro-N-[(5-\{[4-(2-phenylethyl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          N-({5-[(4-{[3-chloro-5-(trifluoromethyl)pyridin-2-}
yl]amino}piperidin-1-yl)sulfonyl]thien-2-yl}methyl)-3-
nitrobenzamide;
          N-[(5-\{[4-([1,1'-biphenyl]-3-ylamino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-nitrobenzamide;
          N-[(5-{[4-(3-benzylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-nitrobenzamide;
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3-nitro-N-{[5-({4-[3-(morpholin-4-
ylsulfonyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          3-\text{nitro-N-}[(5-\{[4-(3-\text{propylphenoxy})\text{piperidin-}1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-nitro-N-[(5-{[4-(pyrimidin-2-ylamino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          N-\{[5-(\{4-[(3-aminopyridin-2-yl)amino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}-4-nitrobenzamide;
          4-nitro-N-[(5-{[4-({3-nitropyridin-2-
yl amino) piperidin-1-yl sulfonyl thien-2-yl) methyl benzamide;
          N-[(5-\{[4-(2,3-dihydro-1H-inden-5-ylamino)piperidin-
1-yl]sulfonyl}thien-2-yl)methyl]-4-nitrobenzamide;
          4-nitro-N-[(5-{[4-(2-propylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-nitro-N-[(5-{[4-(4-propylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          N-[(5-{[4-(3-tert-butylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-nitrobenzamide;
          4-nitro-N-{[5-({4-[3-(1,3-oxazol-5-
yl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          4-\text{nitro-N-}[(5-\{[4-(2-\text{phenylethyl})\text{piperidin-1-}]
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          N-({5-[(4-{[3-chloro-5-(trifluoromethyl)pyridin-2-
yl]amino}piperidin-1-yl)sulfonyl]thien-2-yl}methyl)-4-
nitrobenzamide;
          N-[(5-{[4-([1,1'-biphenyl]-3-ylamino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-nitrobenzamide;
          N-[(5-{[4-(3-benzylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-nitrobenzamide;
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4-nitro-N-{[5-({4-[3-(morpholin-4-
ylsulfonyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          N-[(5-{[4-(2-aminoanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-nitrobenzamide;
          3-nitro-N-[(5-{[4-(pyrimidin-2-ylamino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          N-\{[5-(\{4-[(3-aminopyridin-2-yl)amino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}-3-nitrobenzamide;
          N-({5-[(4-{2-nitro-4-
[(trifluoromethyl)sulfonyl]anilino}piperidin-1-
yl)sulfonyl]thien-2-yl}methyl)-3-methoxybenzamide;
          3-\text{nitro-N-}(\{5-[(4-\{[4-(\text{trifluoromethyl})\text{pyrimidin-}2-
yl]amino}piperidin-1-yl)sulfonyl]thien-2-yl}methyl)benzamide;
          N-[(5-{[4-(3-cyclohexyl-4-hydroxyanilino)piperidin-
1-yl]sulfonyl}thien-2-yl)methyl]-3-nitrobenzamide;
          N-({5-[(4-{3-}
[(butylamino)sulfonyl]anilino}piperidin-1-yl)sulfonyl]thien-2-
yl}methyl)-3-nitrobenzamide;
          N-[(5-\{[4-(3-ethylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-nitrobenzamide;
          3-nitro-N-[(5-{[4-(5,6,7,8-tetrahydronaphthalen-1-
ylamino)piperidin-1-yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-nitro-N-[(5-{[4-(3-propylphenoxy)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          N-[(5-{[4-(2,4-difluorobenzoyl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-nitrobenzamide;
          N-[(5-\{[4-(2,4-difluorobenzoyl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-methoxybenzamide;
          2-Hydroxy-N-({5-[(4-{3-}
[(trifluoromethyl)sulfonyl]anilino}piperidin-1-
yl)sulfonyl]thien-2-yl}methyl)benzamide;
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N-[(5-\{[4-(1H-1,2,3-benzotriazol-1-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-methoxybenzamide;
          N-[(5-\{[4-(1H-1,2,3-benzotriazol-1-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-2-hydroxybenzamide;
          N-\{[5-(\{4-[4-(1,3-dithiolan-2-yl)anilino]piperidin-
1-yl}sulfonyl)thien-2-yl]methyl}-3-nitrobenzamide;
          3-methoxy-N-[(5-{[4-(3-methoxyanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          3-methoxy-N-\{[5-(\{4-[3-
(trifluoromethyl) anilino] piperidin-1-yl } sulfonyl) thien-2-
yl]methyl}benzamide;
          N-\{[5-(\{4-[3-(dimethylamino)anilino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}-3-methoxybenzamide;
          3-methoxy-N-[(5-{[4-(3-propylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          3-methoxy-N-\{[5-(\{4-[3-
(methylsulfonyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          3-methoxy-N-\{[5-({4-[3-
(methylsulfanyl) anilino|piperidin-1-yl}sulfonyl) thien-2-
yl]methyl}benzamide;
          N-\{[5-(\{4-[3-(aminosulfonyl)anilino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}-3-methoxybenzamide;
          methyl 3-(\{1-[(5-\{[(3-methoxybenzoyl)amino]-
methyl}thien-2-yl)sulfonyl]piperidin-4-yl}amino)-benzoate;
          N-{[5-({4-[3-(aminocarbonyl)anilino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}-3-methoxybenzamide;
          3-methoxy-N-[(5-{[4-(2-methoxyanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          N-({5-[(4-{3-nitroanilino})piperidin-1-
yl)sulfonyl]thien-2-yl}methyl)-3-methoxybenzamide;
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3-methoxy-N-\{[5-({4-[2-
(trifluoromethyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          N-({5-[(4-{2-nitroanilino}piperidin-1-
yl)sulfonyl]thien-2-yl}methyl)-3-methoxybenzamide;
          N-{[5-({4-[4-(aminocarbonyl)anilino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}-3-methoxybenzamide;
          N-\{[5-(\{4-[4-(1,3-dithiolan-2-yl)\}anilino])\}
1-yl}sulfonyl)thien-2-yl]methyl}-3-methoxybenzamide;
          N-[(5-{[4-(3-chloroanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-methoxybenzamide;
          N-[(5-{[4-(4-chloroanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-methoxybenzamide;
          3-methoxy-N-({5-[(4-{4-
[(trifluoromethyl)sulfonyl]anilino}piperidin-1-
yl) sulfonyl] thien-2-yl }methyl) benzamide;
          N-({5-[(4-{3-[amino(imino)methyl]anilino}piperidin-
1-yl)sulfonyl]thien-2-yl}methyl)-3-methoxybenzamide;
          N-({5-[(4-{3-[(2-
hydroxyethyl)sulfonyl]anilino}piperidin-1-yl)sulfonyl]thien-2-
yl}methyl)-3-methoxybenzamide;
          3-methoxy-N-({5-[(4-{3-}
[(trifluoromethyl)sulfonyl]anilino}piperidin-1-
yl) sulfonyl] thien-2-yl }methyl) benzamide;
          N-({5-[(4-anilinopiperidin-1-yl)sulfonyl]thien-2-
yl}methyl)-3-methoxybenzamide;
          3-methoxy-N-({5-[(4-{3-}
[(trifluoromethyl)sulfanyl]anilino}piperidin-1-
yl)sulfonyl]thien-2-yl}methyl)benzamide;
          N-[(5-{[4-(4-hydroxyanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-methoxybenzamide;
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3-nitro-N-({5-[(4-{3-
[(trifluoromethyl)sulfanyl]anilino}piperidin-1-
yl) sulfonyl] thien-2-yl}methyl) benzamide;
          4-nitro-N-({5-[(4-{3-
[(trifluoromethyl)sulfanyl]anilino}piperidin-1-
yl) sulfonyl] thien-2-yl}methyl) benzamide;
          N-[(5-{[4-(2-hydroxyanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-methoxybenzamide;
          3-methoxy-N-[(5-{[4-(pyrimidin-2-ylamino)piperidin-
1-yl]sulfonyl}thien-2-yl)methyl]benzamide;
          N-\{[5-(\{4-[(3-aminopyridin-2-yl)amino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}-3-methoxybenzamide;
          N-[(5-\{[4-(\{3-nitropyridin-2-yl\}amino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-methoxybenzamide;
          N-\{[5-(\{4-[(2,2-dioxido-1,3-dihydro-2-benzothien-5-
yl)amino]piperidin-1-yl}sulfonyl)thien-2-yl]methyl}-3-
methoxybenzamide;
          N-[(5-\{[4-(2,3-dihydro-1H-inden-5-ylamino)piperidin-
1-yl]sulfonyl}thien-2-yl)methyl]-3-methoxybenzamide;
          3-methoxy-N-[(5-{[4-(2-propylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          3-methoxy-N-[(5-{[4-(4-propylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          N-[(5-{[4-(3-tert-butylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-methoxybenzamide;
          N-({5-[(4-{[3-chloro-5-(trifluoromethyl)pyridin-2-}
yl]amino}piperidin-1-yl)sulfonyl]thien-2-yl}methyl)-3-
methoxybenzamide;
          3-methoxy-N-{[5-({4-[3-(1,3-oxazol-5-
yl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          N-[(5-\{[4-([1,1'-biphenyl]-3-ylamino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-methoxybenzamide;
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3-methoxy-N-[(5-{[4-(3-propylphenoxy)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          3-methoxy-N-\{[5-(\{4-[3-(morpholin-4-
ylsulfonyl)anilino]piperidin-1-yl}sulfonyl)thien-2-
yl]methyl}benzamide;
          3-methoxy-N-[(5-{[4-(2-phenylethyl)piperidin-1-}
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          N-[(5-\{[4-(3-benzylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-methoxybenzamide;
          3-methoxy-N-({5-[(4-{[4-(trifluoromethyl)pyrimidin-}
2-yl]amino}piperidin-1-yl)sulfonyl]thien-2-
yl \methyl) benzamide;
          N-[(5-{[4-(3-cyclohexyl-4-hydroxyanilino)piperidin-
1-yl]sulfonyl}thien-2-yl)methyl]-3-methoxybenzamide;
          N-({5-[(4-{3-
[(butylamino)sulfonyl]anilino}piperidin-1-yl)sulfonyl]thien-2-
yl}methyl)-3-methoxybenzamide;
          N-[(5-\{[4-(3-ethylanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3-methoxybenzamide;
          3-methoxy-N-[(5-\{[4-(5,6,7,8-tetrahydronaphthalen-1-
ylamino)piperidin-1-yl]sulfonyl}thien-2-yl)methyl]benzamide;
          N-[(5-\{[4-(1H-1,2,3-benzotriazol-1-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-5-nitro-1H-pyrazole-3-
carboxamide;
          N-[(5-\{[4-(1H-1,2,3-benzotriazol-1-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-2-oxo-1,2-dihydropyridine-3-
carboxamide:
          N-[(5-\{[4-(1H-1,2,3-benzotriazol-1-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-2-thioxo-1,2-dihydropyridine-3-
carboxamide;
          N-[(5-\{[4-(1H-1,2,3-benzotriazol-1-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-3,4-dihydroxybenzamide;
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N-[(5-\{[4-(1H-1,2,3-benzotriazol-1-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]pyridine-2-carboxamide;
                         N-[(5-{[4-(hexyloxy)piperidin-1-yl]sulfonyl}thien-2-
yl) methyl] -3-methoxybenzamide;
                          N-({5-[(4-heptanoylpiperidin-1-yl)sulfonyl]thien-2-
yl}methyl)-3-methoxybenzamide;
                          4-chloro-N-[(5-{[4-(3-propylanilino)piperidin-1-
yl]sulfonyl}-2-furyl)methyl]benzamide;
                          4-chloro-N-[(5-{[4-(3-chloroanilino)piperidin-1-
yl]sulfonyl}-2-furyl)methyl]benzamide;
                          4-chloro-N-[(5-{[4-(3-methoxyanilino)piperidin-1-
yl]sulfonyl}-2-furyl)methyl]benzamide;
                          4-chloro-N-{[5-({4-[3-
 (trifluoromethyl) anilino]piperidin-1-yl}sulfonyl) -2-
furyl]methyl}benzamide;
                          4-chloro-N-{[5-({4-[3-
 (dimethylamino)anilino]piperidin-1-yl}sulfonyl)-2-
furyl]methyl}benzamide;
                          4-chloro-N-{[5-({4-[3-
 (methylsulfonyl)anilino]piperidin-1-yl}sulfonyl)-2-
furyl]methyl}benzamide;
                          4-chloro-N-{[5-({4-[3-
 (methylsulfanyl)anilino]piperidin-1-yl}sulfonyl)-2-
furyl]methyl}benzamide;
                         N-\{[5-(\{4-[3-(aminosulfonyl)anilino]piperidin-1-
yl}sulfonyl)-2-furyl]methyl}-4-chlorobenzamide;
                          methyl 3-(\{1-[(5-\{[(4-chlorobenzoyl)amino]methyl\}-2-
furyl) sulfonyl]piperidin-4-yl}amino) benzoate;
                          3 - (\{1 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl\} - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - \{[(4 - chlorobenzoyl) amino] methyl] - 2 - [(5 - [(4 - chlorobenzoyl) amino] methyl] - [(5 - [(4 - chlorobenzoyl) amino] methylla - [(5 - [(4 - chlorobenzoyl) amino] methylla - [(5 - [(4 - chlorobenzoyl) amino] methylla - [(5 - [(4 - [(4 - chlorobenzoyl) amino] me
furyl) sulfonyl]piperidin-4-yl}amino) benzamide;
                          4-chloro-N-({5-[(4-{3-nitroanilino}piperidin-1-
yl)sulfonyl]-2-furyl}methyl)benzamide;
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4-chloro-N-[(5-{[4-(2-methoxyanilino)piperidin-1-
yl]sulfonyl}-2-furyl)methyl]benzamide;
          4-chloro-N-{[5-({4-[2-
(trifluoromethyl) anilino] piperidin-1-yl sulfonyl) -2-
furyl]methyl}benzamide;
          4-chloro-N-({5-[(4-{2-nitroanilino}piperidin-1-
yl)sulfonyl]-2-furyl}methyl)benzamide;
          4-chloro-N-[(5-{[4-(4-chloroanilino)piperidin-1-
yl]sulfonyl}-2-furyl)methyl]benzamide;
          4-chloro-N-{[5-({4-[4-
(trifluoromethyl)anilino]piperidin-1-yl}sulfonyl)-2-
furyl]methyl}benzamide;
          4-chloro-N-({5-[(4-{4-
[(trifluoromethyl)sulfonyl]anilino}piperidin-1-yl)sulfonyl]-2-
furyl}methyl)benzamide;
          N-{[5-({4-[4-(aminocarbonyl)anilino]piperidin-1-
yl}sulfonyl)-2-furyl]methyl}-4-chlorobenzamide;
          4-chloro-N-{[5-({4-[4-(1,3-dithiolan-2-
yl)anilino]piperidin-1-yl}sulfonyl)-2-furyl]methyl}benzamide;
          N-({5-[(4-{3-[amino(imino)methyl]anilino}piperidin-
1-yl)sulfonyl]-2-furyl}methyl)-4-chlorobenzamide;
          4-chloro-N-({5-[(4-{3-
[(trifluoromethyl)sulfonyl]anilino}piperidin-1-yl)sulfonyl]-2-
furyl}methyl)benzamide;
          N-({5-[(4-anilinopiperidin-1-yl)sulfonyl]-2-
furyl}methyl)-4-chlorobenzamide; and
          4-nitro-N-({5-[(4-{3-
[(trifluoromethyl)sulfanyl]anilino}piperidin-1-yl)sulfonyl]2-
furyl \methyl) benzamide.
```

12. (Previously Presented) A sulfonamide compound according to claim 11, which is selected from the group consisting of:

formula I

```
4-chloro-N-[(5-{[4-(2,4-difluorobenzoyl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
         N-({5-[(4-anilinopiperidin-1-yl)sulfonyl]thien-2-
yl}methyl)-4-chlorobenzamide;
          N-[(5-\{[4-(1H-1,2,3-benzotriazol-1-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-chlorobenzamide;
          N-[(5-\{[4-(1H-benzimidazol-1-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-4-chlorobenzamide;
          4-chloro-N-{[5-({4-[3-propylanilino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}benzamide;
          4-chloro-N-[(5-{[4-(4-chloroanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          4-chloro-N-({5-[(4-{3-[(2-
hydroxyethyl) sulfonyl] anilino } piperidin-1-yl) sulfonyl] thien-2-
yl}methyl)benzamide;
          N-{[5-({4-[3-(aminosulfonyl)anilino]piperidin-1-
yl}sulfonyl)thien-2-yl]methyl}-4-chlorobenzamide;
          4-nitro-N-[(5-{[4-(3-methoxyanilino)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]benzamide;
          methyl 3-{[1-({5-[({4-
nitrobenzoyl amino) methyl] thien-2-yl sulfonyl) piperidin-4-
yl]amino}benzoate;
          N-[(5-{[4-(1H-1,2,3-benzotriazol-1-yl)piperidin-1-
yl]sulfonyl}thien-2-yl)methyl]-2-hydroxybenzamide; and
          N-({5-[(4-{2-nitroanilino})piperidin-1-
yl)sulfonyl]thien-2-yl}methyl)-3-methoxybenzamide.
          13.
               (Currently Amended) A method for the
modulation of the JNK pathway, comprising administering an
effective amount of a sulfonamide compound according to
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$$Ar^{1}$$
 N $(CH_{2})_{n}$ Ar^{2} SO_{2} Y X R^{1}

I

wherein Ar¹ and Ar² are independently from each other substituted or unsubsti-tuted aryl or heteroaryl groups;

X is O or S;

 R^1 is hydrogen or a C_1 - C_6 -alkyl group, or R^1 forms a substituted or unsubstituted 5-6-membered saturated or unsaturated ring with Ar^1 ;

n is an integer from 0 to 5;

Y within formula I is an unsubstituted or a substituted 4-12 membered saturated cyclic or bicyclic alkyl containing at least one nitrogen atom, whereby one nitrogen atom within said ring is forming a bond with the sulfonyl group of formula I thus providing a sulfonamide piperidino group.

- 14. (Previously Presented) A method according to claim 13 for the treatment of disorders associated with the abnormal expression or activity of JNK.
- 15. (Previously Presented) A method according to claim 14 for the treatment of disorders associated with abnormal expression or activity of JNK2 and/or 3.
- 16. (Previously Presented) A method for the treatment of neuronal disorders comprising administering to a patient in need thereof an effective amount of a sulfonamide compound according to formula I in claim 1.
- 17. (Previously Presented) A method for the treatment of autoimmune diseases comprising administering to a

patient in need thereof an effective amount of a sulfonamide compound according to formula I in claim 13.

- 18. (Previously Presented) A method for the treatment of cancer comprising administering to a patient in need thereof an effective amount of a sulfonamide compound according to formula I in claim 13.
- 19. (Previously Presented) A method for the treatment of cardiovascular diseases comprising administering to a patient in need thereof an effective amount of a sulfonamide compound according to formula I in claim 13.
- 20. (Previously Presented) A pharmaceutical composition containing at least one sulfonamide compound according to claim 1 and a pharmaceutically acceptable carrier, diluent or excipient.
- 21. (Previously Presented) Process for the preparation of a sulfonamide compound according to claim 1, comprising reacting a sulfonyl chloride V

$$Ar^{1}_{O}H^{-}(CH_{2})_{n}Ar^{2}SO_{2}CI$$

V

with an amine VIII

whereby $(R^6)_n$, L^1 and L^2 are as defined in claim 1.

22. (Currently Amended) A process according to claim 21, wherein said sulfonyl chloride V is obtained by a) coupling an amine of formula II:

$$R^1HN-(CH_2)_n-Ar^2$$

where Ar² and R¹ are as defined in claim 1, with an acyl chloride of formula III:

III

where Ar^1 is as defined in claim 1, to provide an amide of formula IV:

$$Ar^{1} \frac{R_{\parallel}^{1}}{N} - (CH_{2})_{n} - Ar^{2}$$

IV

b) sulfonating the amide of formula IV to provide a sulfonyl chloride V

$$Ar^{1} \underset{O}{ \parallel} N^{-}(CH_{2})_{n} \xrightarrow{A} r^{2} SO_{2}CI$$

ν.

- 23. (Previously Presented) A method in accordance with claim 16, wherein said neuronal disorder is selected from the group consisting of epilepsy, Alzheimer's disease, Huntington's disease, Parkinson's disease, retinal diseases, spinal cord injury, and head trauma.
- 24. (Previously Presented) A method in accordance with claim 17, wherein said autoimmune disease is selected from the group consisting of multiple sclerosis, inflammatory bowel disease (IBD), rheumatoid arthritis, asthma, septic shock, and transplant rejection.
- 25. (Previously Presented) A method in accordance with claim 18, wherein said cancer is selected from the group consisting of breast-, colorectal-, and pancreatic cancer.

- 26. (Previously Presented) A method in accordance with claim 19, wherein said cardiovascular disease is selected from the group consisting of stroke, arteriosclerosis, myocardial infarction, and myocardial reperfusion injury.
- 27. (Previously Presented) Sulfonamide compounds according to claim 1 wherein n is an integer of from 1 to 3.
- 28. (Previously Presented) Sulfonamide compounds according to claim 27 wherein n is 1.
- 29. (Currently Amended) Sulfonamide eempounds Compositions according to claim 2 wherein n is an integer of from 1 to 3.
- 30. (Currently Amended) <u>Sulfonamide compounds The</u> composition according to claim 29 wherein n is 1.
- 31. (Currently Amended) Sulfonamide compounds Compositions according to claim 3 wherein n is 1 or 2.
- 32. (Previously Presented) The method according to claim 13 wherein X is O.
- 33. (Previously Presented) The method according to claim 13 wherein n is an integer of from 1 to 3.
- 34. (Previously Presented) The method according to claim 33 wherein n is 1.
- 35. (Previously Presented) The sulfonamide compound according to claim 5 wherein the $C_1\text{-}C_4$ alkyl group is trihalomethyl.

- 36. (Currently Amended) The sulfonamide compound according to claim 10 wherein $\frac{L1}{L}$ is a triazole ring which is fused with an unsubstituted or substituted aryl or heteroaryl.
- 37. (Previously Presented) A method for treating diseases or disorders which are mediated by the JNK function or pathways comprising administering to a patient in need thereof a compound according to claim 1 that inhibits the JNK function of pathways.
- 38. (Previously Presented) The method according to claim 37 wherein the disease or disorder is a neuronal disorder selected from the group consisting of epilepsy, Alzheimer's disease, Huntington's disease. Parkinson's disease, retinal diseases, spinal cord injury, and head trauma.
- 39. (Previously Presented) The method according to claim 37 wherein the disease is an autoimmune disease selected from the group consisting of multiple sclerosis, inflammatory bowel disease (IBD), rheumatoid arthritis, asthma, septic shock, and transplant rejection.
- 40. (Previously Presented) The method according to claim 37 wherein the disease is cancer selected from the group consisting of breast, colorectal, and pancreatic cancer.
- 41. (Previously Presented) The method according to claim 37 wherein the disease is a cardiovascular disease selected from the group consisting of stroke, arteriosclerosis, myocardial infarction, and myocardial reperfusion injury.